

# Dollarization in East Africa: Causes, Consequences, and Future Forecasts

Osman Sayid Hassan Musse<sup>1</sup>; Abdelghani Echchabi<sup>2</sup>

<sup>1</sup>Faculty of Economics and Muamalat, Islamic Science University of Malaysia  
Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan, Malaysia

<sup>2</sup>Accounting and Finance Department, College of Business Administration, A'Shariyah University  
Al Yahmadi, North Asharqiyah, P.O Box 42, Ibra 400, Oman  
<sup>1</sup>osmansayid@gmail.com; <sup>2</sup>abdelghani.mo@gmail.com

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## ABSTRACT

The dollarization phenomenon has been widespread among the East African countries for many decades. This trend results in several consequences that might be either beneficial or harmful to these countries and their likes. The objective of this research was to empirically examine the causes, consequences and the future scenarios of dollarization in one of the leading regional countries such as Somalia. The research used a survey of over 100 respondents and applied descriptive statistics and t-tests to achieve the above objectives. The findings show that the main causes of Dollarization in Somalia are the implementation of the *Hawallah* (money transfer) system, the remarkable absence of the central bank and other monitoring financial authorities, the increasing exports and imports of the Somalian economy, the loss of confidence in the local Somalian Shilling, and the relative ease at which the Somalian Shilling can be printed and manipulated by selected market players. These causes are found to be mainly triggered by the revenue from exports, the policies and regulations implemented by the Somali government, the Somali Diaspora, and the international aid organizations. This has resulted in the foreign traders buying Somali goods at a relatively lower price and taking advantage of the depreciated Somali Shilling against most international currencies.

**Keywords:** dollarization, East Africa, Somalia, US Dollar

## INTRODUCTION

For the last two decades, the use of foreign currency, mainly US Dollar, alongside with local currencies was widely accepted in East African countries. This process is called the dollarization phenomenon. Dollarization is a country's adoption of foreign currency mainly US Dollar alongside with its national currency to serve for one or all money functions; the medium of payments, store of value and unit of account in domestic transactions. This process can be categorized as an official/legal tender dollarization such as in the case of some Latin America countries' experience or as an unofficial dollarization. However, in the case of East African countries, it is known to be as unofficial dollarization.

There are some causes that induce a country to dollarize its economy. High inflation or hyperinflation was found to be one of the main dollarization drivers (Aarle & Budina, 1996). Kessy (2011) reported that dollarization had gained ground in Tanzania since 1990. In 2009, the total foreign currency deposits had reached \$1.6 billion. Moreover, US Dollar is used to serve in the domestic market for the payments of some imported goods with high value and the payment of some private school fees. In Uganda, the dollarization was dated back to 1992, when residents were allowed to own a foreign currency based account at their relative commercial banks for the purpose of minimizing the risk of currency mismatch and facilitating their business operations (Katarikawe, 2001). Therefore, the dollarization has gradually increased in Uganda.

For instance, the ratio of financial dollarization increased from 27,9% in 2011 to 31,7% in 2012 using the percentage of total foreign currency assets to total assets in the banking sector measurement, while financial dollarization ratio increased from 33,6% to 34,9% for the same period employing the percentage of total foreign currency deposits to the total banking sector deposits approach (Uganda, 2012). In Kenya, the share of foreign currency deposits in the private banking sector raised to 16% of total deposits, while it is 37% of total deposits of the banking sector in Tanzania (Čihák & Podpiera, 2005). The dollarization is a widespread phenomenon in the region. In some levels, the dollarization provides a certain level of price stability and low level of the exchange rate in a high inflation country. Therefore, an empirical research suggested that dollarization has a positive impact on real exchange rate volatility in Eritrea (Kyriakos & Christos, 2013).

However, in the case of Somalia, the use of foreign currency was turned to 1991, when the collapse of Somali government led to a complete breakdown of the formal financial system in the country (Cockayne & Shetret, 2012). It was the first time when Somali shilling (So.Sh) began circulating in the market without the supervision of Central Bank of Somalia (CBS). The CBS was totally out of operation for the last two decades, and the country's financial system was run by informal financial institutions mainly *Hawallah* (System or Money Transfer) for companies. Even until today, the CBS is an inactive and not yet ready to take its responsibilities toward country's monetary policies (Sayid & Echchabi, 2013).

Historically, in the post-war period, there were numbers of Somali Shilling banknotes such as 5, 10, 20, 50, 100, 500, and 1000 Shillings in the circulation serving as money with its full functions. However, currently, there is only one single Somali shilling note; which is So.Sh 1000 in the circulation. It serves only as a medium for small transaction payments across the nation, while the rest of banknotes have disappeared. Furthermore, the Somali Shilling has become a victim of being misused by some state governments, warlords and businessmen in printing a huge Somali Shilling and injecting it into the economy on the cost of public interest. This significantly intends to depreciate or devalue Somali Shilling, volatilises exchange rate and increasingly fuels the high inflation in the country (Maimbo, 2006; Nenova, 2013). Meanwhile, there is a growing feeling from the public toward the credibility of Somali Shilling as a stable currency. Therefore, this gradually leads them to lose their confidence in their currency (East Regional Department, 2012). Consequently, the US Dollar has found a window opportunity and intended to fill this gap to serve as medium of exchange, unit of account and store of value in the domestic market across the country (Planning, 2013).

Freitas (2004) investigated the relationship between money and inflation in a small open economy, where domestic and foreign currencies were

perfectly substituted as means of payment concluding. A temporary increase in inflation rate may have a permanent usage of foreign currency. For the same purpose, a sample of 79 economies with different level of development was studied using the Generalized Method of Moments (GMM). The result suggested that dollarization is a rational response to the future inflation associated with investors' expectations of observed default in highly indebted economies (Vieira *et al.*, 2012). Furthermore, high inflation was the cause of dollarization in Indonesia (Schuler, 1999).

On the other hand, currency depreciation is a fundamental factor that increases the usage of foreign currency in a domestic market (Bolbol, 1999). In this regard, Sharma *et al.* (2005) investigated the role of the US dollar as a currency substitution in six Asian economies namely Indonesia, Japan, Korea, Malaysia, Singapore and Thailand using Morishima Elasticities. They found that the depreciation was the leading factor of dollarization in the above mentioned Asian countries, not due to the opportunity cost of holding US dollar or interest rate. For the same aim, the presence of unofficial dollarization and its determinants in Jordan were studied from 1988 to 1997. The result was in line with that the depreciation of Jordanian dinar led to a decline in Jordanian dinar holding and increased US dollar holding by residents (Kasawneh *et al.*, 2010). Moreover, Ra (2008) examined whether the holding of US dollar was due to the effect of the expected rate of depreciation in the exchange rate market of three transitional economies in South-East Asia: Cambodia, Laos, and Vietnam. He found that there was a positive effect of the expected rate of depreciation on the holding of US dollar in the above three countries. To support this argument, Lira depreciation was used as the main factor behind the usage of US Dollar as currency substitution in Turkey (Selcuk, 1994). In a further analysis, to compare the determinants of loan dollarization in two emerging regions, namely Central, Eastern and South-Eastern Europe and Latin America, Hake *et al.* (2014) investigated the impact of exchange volatility on the usage of foreign currency in both above two regions. In the CESEE region, they found that the exchange rate volatility plays a more prominent role for the use of foreign currency. This means that the depreciation of local currency increases the holding of foreign currency by residents to avoid the risk associated with exchange rate volatility.

On the contrary, to figure out the main factor of determinants of financial dollarization in transition economies in a short-run period, the following variables: deposit dollarization, liability dollarization, change in dollarization, exchange rate, change in foreign asset, money base and interest rate differential were studied using descriptive analysis, correlation, and regression techniques. The result revealed that international financial integration was the primary cause of short-run loan dollarization drivers in transition economies (Neandis & Savva, 2009). To support this subject, Berg and Borensztein (2000) figured out that a deeper integration into the global

market was the major leading factor of dollarization.

Moreover, Nicolo *et al.* (2005) researched the causes of dollarization and its consequences. They found that the credibility of macroeconomic policies and the quality of institutions were the key determinants of cross-country variations of dollarization. Moreover, the relationship between finance institution quality and the level of financial dollarization was investigated in the light of identifying the causes of dollarization. The result indicated that there was a negative relationship between the above two variables. In other words, the improvement of financial institutions led to the lower level of financial dollarization and vice versa (Kyriakos & Christos, 2013). In further details, Menon (2008) studied the determinants and causes of dollarization in South-East Asia and stated that macroeconomic instability and underdeveloped financial institutions were fundamental causes of the dollarization in the region.

Furthermore, Bolbol (1999) analyzed the relationship between seigniorage and dollarization in relation to the inflation and the exchange rate depreciation during the Lebanese's civil war period by examining these variables: seigniorage, dollarization, public debt, inflation tax as a percentage of GDP, money base, government deficit as a percentage of GDP, net public debt as a percentage of GDP, real interest, ratio of foreign currency deposits to total deposits, broad liquidity as percentage of GDP, net foreign assets and domestic credit. Descriptive analysis and other statistic techniques were applied in this research. It was concluded that the budget deficit was the primary reason behind the unofficial dollarization in Lebanon. Meaning that in a war era, the government expenditure increased. Consequently, it would have an effect on the balance of payments, which intended to end in a huge deficit and, thereby, reduced the value of the domestic currency against foreign currencies.

However, in order to identify major factors that contribute to dollarize an economy, Honig (2009) studied dollar credit to total credit, dollar credit to total assets, dollar deposits to total deposits, dollar deposits to total liabilities, total dollarization to total credit and deposits, and total dollarization to total credit and liabilities using various techniques of statistics and descriptive analysis. The target was to figure out which one of the following factors: exchange rate regimes and government quality were the primary leading factor in dollarization process. It was finally concluded that the unofficial dollarization was due to a lack of faith in the domestic currency. It occurred because the government had failed to fulfill its promises toward long-run currency stability policies.

In contrast, the causes of currency substitution in four Eastern European countries in transition economics such as Poland, Hungary, Romania, and Bulgaria were investigated. The findings showed that economic and political instability were the main leading factors toward currency substitution in Eastern European countries (Aarle & Budina, 1996). Moreover, to investigate the dollarization drivers

in South East Asia, Menon (2008) suggested that political uncertainty is the major cause of dollarization in South-East Asia.

In addition, an empirical research found that interest rate differential between domestic and international market was the key dollarization drivers in Latin America, where residents were willing to gain the high rate of return on their investment. Thereby, they invested in a foreign currency dominated asset with a hope to gain the interest rate differential (Hake *et al.*, 2014). Besides these, the reviewed literature also discussed some other dollarization causes such as risk deviations, banks matching of domestic loans and deposits and currency matching of assets and liabilities and as well as weak legal system (Neandis & Savva, 2009; Menon, 2008) respectively.

The issue of dollarization has been extensively debated in the literature. However, this issue has not been previously discussed enough in the case of East African countries. Particularly, this research will be one of the first studies carried out in the context of Somalia. Therefore, the main aim of this research is to investigate the causes and the consequences of dollarization and forecast the future of the existing dollarization in the region.

## METHODS

The research focuses on the East African region, specifically the Somalian context. The targeted sample includes respondents that are highly involved with the issue of dollarization and its consequences in Somalia. In this regard, 100 questionnaires are randomly distributed to the respondents in question, out of which 80 questionnaires are properly filled and returned. Hence a response rate of 80 percent is achieved.

The questionnaire consists of two main sections. The first section seeks information on the causes, consequences, and future of dollarization in Somalia. This first section was in the form of various statements measured on a 5-points Likert scale. The second section gathers demographic information of the respondents to ensure the suitability of the sample for the intended purpose of the research. It is worth noting that the data are analyzed through descriptive statistics and one sample t-test using the SPSS18 software.

The respondents' profiles in Table 1 indicate that 54% of the respondents are male while 46% are female. Regarding age distribution, 78,7% of the respondents are between 20 and 30 years old, 16,3% of them are between 31 and 40 years old, 2,5% are between 41 and 50 years old, while another 2,5% are below 20 years old. Regarding the education level, 56,2% of the respondents are holding an undergraduate degree, 15% of them are holding a diploma, other 15% of the respondents are holding a post-graduate degree, and 7,5% of them are holding a professional degree, while 6,3% of them are holding a high school certificate. Regarding occupation, 45% of the respondents are



students, 17,5% are working in the private sector, other 17,5% are self-employed, 10% are unemployed, 6,3% are holding positions with international aid organizations, and 3,2% are working with the public sector. Table 1 shows the profile of the respondents.

Table 1 Respondents' Profile

Description	Categories	Percentage
<b>Gender</b>	Male	54,0
	Female	46,0
<b>Age</b>	Below 20	2,5
	20-30	78,7
	31-40	16,3
	41-50	2,5
	Above 50	-
<b>Level of Education</b>	High School	6,3
	Diploma	15,0
	Professional	7,5
	Undergraduate	56,2
	Postgraduate	15,0
<b>Occupation</b>	Public sector/ Government offices	3,2
	Private Sector	17,5
	Self-Employed	17,5
	Aid Organizations	6,3
	Student	45,0
	Unemployed	10,0

## RESULTS AND DISCUSSIONS

Dollarization is used as a monetary policy that can bring some level of price stability and promote financial deepening in high inflation or hyperinflation countries. In assessing the benefits and risks associated with financial dollarization, some empirical studies suggested that dollarization is a useful tool that promotes financial deepening in a high inflation country (Nicolo *et al.*, 2005). On this subject, the impact of foreign currency deposit on financial deepening was investigated in emerging market countries. In general, the result suggested that the foreign currency deposit has a consistent and negative impact on financial deepening, except in high-inflation economies (Court *et al.*, 2012) meaning that in high inflation period, the dollarization policy may provide some level of price stability.

Furthermore, the relationship between dollarization and trade enhance was investigated in Latin America countries namely Bahamas, Bermuda, Dominican Republic, Guatemala, Liberia, and Panama to see whether there is a positive relationship or not. The result strongly supported that the dollarization does not only significantly increase the bilateral trade between the USA and dollarized countries, but it also promotes trade among dollar-zone countries (Lin & Ye, 2010).

Additionally, one of the good sides of dollarization is stabilizing price level and bringing a consistent and stable exchange rate in high inflation and exchange rate volatility countries. Kang (2005) examined the role of dollarization in Cambodia for 12 years. He reported that the proportion of US Dollar in domestic transactions increased to 70 % of total transactions. The author also found that dollarization brings some level of price stability in high inflation countries. Furthermore, reducing the degree of exchange rate volatility in highly volatilized countries is one of the dollarization benefits (Payne, 2009). To support this argument, an empirical research revealed that official dollarization significantly reduces the degree of volatility persistence in response to inflationary shocks in El Salvador by testing inflation, inflation uncertainty and dollarization using ARIMA–GARCH model as analysis tools.

Moreover, dollarization had successfully provided a stable money and stable expected value of its future value; this is due to the failure of national monetary arrangement in Ecuador (Hanke, 2003). On this subject, the impact of dollarization on Eritrean exchange rate volatility was studied using quarterly official and black-market exchange rate data for 1996 to 2008 applying E-GARCH analysis. The findings revealed that dollarization has a positive impact on real exchange rate volatility (Mengesha & Holmes, 2013). Besides these, lowering risk of national default during a foreign currency crisis, enjoying lower borrowing cost and deeper integration into the global market were also among the other listed benefits of dollarization (Berg & Borensztein, 2000).

One of the disadvantages of dollarization is financial instability in dollarized economies (Nicolo *et al.*, 2005). Generally speaking, dollarization is often due to high or hyperinflation; however, the findings indicated that a temporary increase in inflation rate leads a permanent use of foreign currency in a domestic market (Freitas, 2004).

Besides that, dollarization led a great loss of effective monetary, fiscal, foreign trade policies as well as macroeconomic instability respectively (Kang, 2005; Bolbol, 1999). Furthermore, under the dollarization, countries are likely to lose an ability to devalue their currency and control their monetary policies. Consequently, they become totally dependent on U.S. monetary policies (Berg & Borensztein, 2000).

Moreover, dollarization caused a large seigniorage loss; which is estimated up to US\$682 million from 1992 to 2004 and with an additional loss of US\$61 million annually for every following year in Cambodia (Kang, 2005). In addition, the high share of foreign currency in the domestic market reduces government's ability to gain seigniorage revenue concluding that Cambodian government has little opportunity to gain from seigniorage revenue (Samreth, 2010). This is due to that the majority of the local transactions are taken place in US Dollar. In line with the above finding, currency substitution was found to be one of the main factors that affect money

demand; which intends to reduce seignorage revenue in Eastern Europe Countries (Aarle & Budina, 1996).

On the other hand, the impact of deposit dollarization on the financial depth was investigated in forty-four emerging market economies. The result suggested that deposit dollarization has a consistent and negative impact on financial deepening except in high-inflation economies. Therefore, the dollarization is a useful policy to tackle high inflation rate as well as the high volatility of exchange rate (Court, 2012).

The main causes of dollarisation identified in the previous studies as well as in the unstructured interviews are outlined in Table 2. The results indicate that the main causes of dollarization in Somalia are: (1) the implementation of the *Hawallah* (money transfer) system, which has not been closely monitored by the authorities, (2) a remarkable absence of the central bank and other monitoring financial authorities, (3) the increasing exports and imports of the Somalian economy, (4) a loss of confidence in the local Somalian Shilling, and (5) the latter is considered to be relatively easier to be printed and manipulated by selected market players. In contrast, the US Dollar has gained momentum in the country and probably the whole region, due to its international status and recognition not only in the region by worldwide.

As far as the sources of dollarization in Somalia are concerned, the results in Table 3 indicate several factors. Those are the revenue from exports, the policies and regulations implemented by the Somali government, the Somali Diaspora, and the International aid organizations. It is noteworthy that the results show no direct involvement of the warlords and corrupt politicians in the dollarization phenomena in Somalia.

The existence of dollarization in Somalia for many years results in some consequences, summarized in Table 4. Specifically, the foreign traders buying Somali goods will take advantage of the depreciated Somali Shilling against most international currencies. This would negatively affect the Somali economy, without the possibility of appreciating the local currency as it is heavily relying on US Dollar. This would result in further increase of US Dollar supply, which will cause an immediate increase in inflation.

This high and continuing reliance on the US Dollar supply caused a relative loss of monetary and financial independence, especially in establishing policies and regulations. This renders the Somalian economy subject to International developments. This applies to government's financial situation, businesses, and individual savers as well.

Table 2 T-test Output for the Causes of Dollarization

Items	Test Value =3					
	t	df	Sig. (2-tailed)	Main Difference	95% Confidence Interval of the difference	
					Lower	Upper
Absence of central bank of Somalia	4,359	79	0,000	0,675	0,37	0,98
Easy to print So.Sh	2,020	79	0,047	0,325	0,00	0,65
Somali exporters and imports	3,680	79	0,000	0,563	0,26	0,87
Losing confidence in So.Sh	4,080	79	0,000	0,575	0,29	0,86
<i>Hawallah</i> system	5,820	79	0,000	0,763	0,50	1,02

Table 3 T-test Output for The Sources of Dollarization

Items	Test Value =3					
	T	df	Sig. (2-tailed)	Main Difference	95% Confidence Interval of the difference	
					Lower	Upper
Aid organizations	3,342	79	0,001	0,525	0,21	0,84
Somali diaspora	3,821	79	0,000	0,588	0,28	0,89
Somali government	4,523	79	0,000	0,600	0,34	0,86
Export revenue	4,992	79	0,000	0,675	0,41	0,94
Warlords and politician groups	-0,077	79	0,939	-0,013	-0,33	0,31

Table 4 T-test Output for the Consequences of Dollarization

Items	Test Value =3					
	T	df	Sig. (2-tailed)	Main Difference	95% Confidence Interval of the difference	
					Lower	Upper
The monetary independent policies are loss	2,860	79	0,005	0,425	0,13	0,72
USD losses its value, this may affect my saving	2,997	79	0,004	0,363	0,12	0,60
Trillions printed is likely to affect my saving	2,631	79	0,010	0,313	0,08	0,55
The increase in supply of USD will cause inflation	3,723	79	0,000	0,500	0,23	0,77
Foreigners will benefit by buying Somali goods	5,105	79	0,000	0,613	0,37	0,85
The economy will be exposed to the global changes	3,128	79	0,002	0,388	0,14	0,63

In addition, the adoption of foreign currency is the main cause for the disappearance of the national currency in the domestic market. In this regard, Minda (2005) studied the adoption of full dollarization in emerging countries. He concluded that the disappearance of national currencies led an abandonment of monetary sovereignty and a loss of a powerful symbol of national identity. Besides these effects, dollarization motivated the depreciation of the local currencies as well as it increased the exchange rate variability. The result is consistent with the argument that dollarization is one of the crucial causes of exchange rate instability. Moreover, dollarization in Cambodia could be a constraint on poverty reduction, since it tends to affect the living standard of the poor who earn the income in the riel through the depreciation of the currency and intensified volatility of exchange rates (Heng, 2012).

One of the top suggested dollarization policies is improving government quality, which leads to reducing the usage of US Dollar in the domestic market. On this subject, Honig (2009) found that improving government quality and fulfilling its promises toward price stability and lower exchange rate policies will be the optimal policies to de-dollarize the economy. In addition, the relationship between financial institution improvement and financial dollarization was investigated. The result suggested that institutional improvement leads to lower level of financial dollarization (Neanidis & Savva, 2009).

On the other hand, in providing de-dollarization policies, the result indicated that appreciation of ruble was the major driver of the de-dollarization process in Russia (Solovyeva & Vasilieva, 2013). However, in the case of Turkey, the results suggested that the government has to provide a policy that aims to increase the expected rate of return on domestic assets compare to the expected rate of return on foreign currency dominated assets to prevent the dollarization process (Selcuk, 1994). In de-dollarization policies, Kang (2005) has suggested the government has to adopt a policy that prohibits people from using a foreign currency as a substitution currency in the domestic

market by law reasoning that this policy (prohibition by law) will be more effective and efficient than other methods of de-dollarization policies.

## CONCLUSIONS

The objective of the research is to investigate the main causes and consequences of the dollarization process in Somalia. The research uses multiple statistical tools to achieve the previously mentioned objective. The findings show that the main causes of dollarization in Somalia are the implementation of the *Hawallah* (money transfer) system, the remarkable absence of the central bank and other monitoring financial authorities, the increasing exports and imports of the Somalian economy, the loss of confidence in the local Somalian Shilling, and the relative ease at which the Somalian Shilling can be printed and manipulated by selected market players. These causes are found to be mainly triggered by the revenue from exports, the policies and regulations implemented by the Somali government, the Somali Diaspora, and the International aid organizations. This has resulted in the foreign traders buying Somali goods at a relatively lower price, taking advantage of the depreciated Somali Shilling against most International currencies.

These findings provide significant contributions to the policy makers, regulators, and practitioners, as well as to the body of knowledge. Mainly, the research enriches the literature on the dollarization phenomena which has been under-researched, especially in the Eastern African region. Furthermore, these findings provide insights to the Somali authorities on the challenges and threats facing the Somali economy in this current era of increasing globalization. In this regard, the Somali authorities are recommended to rationally assess the current monetary status of the country and establish an adjusted monetary framework favoring more financial stability and economic growth, away from the US Dollar hegemony.

In addition, the Somali market players and foreign participants are required to review their

business models and trade terms to avoid the eventual shocks to the value of the US Dollar, which if persists can have a major contagion effect on the whole Somali economy.

Though the current research has brought about great contributions, it still has some limitations, mainly the sample size which might be seen as limited—though reasonably determined. Hence, future studies are recommended to explore larger and more diversified samples. This can cover different countries in Africa, or even across regions.

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